

## PATENT ABSTRACTS OF JAPAN

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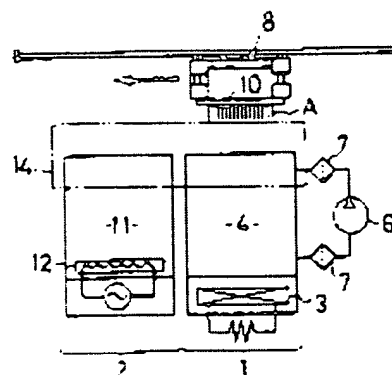
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## (54) CLEANING DEVICE OF SEMICONDUCTOR SUBSTRATE

(57)Abstract:

PURPOSE: To enable the pollutants such as metallic particles, etc., stuck on the deep oarts of semiconductor substrates to be removed powerfully and without fail even if the substrates are subject to high integration and deep etching grooves by immersing the substrates in an ultrasonic oscillated inert liquefied gas.

CONSTITUTION: Etched LSI substrates A are mounted on a parette 10. With the parette reversed, the substrates are carried to a cleaning vessel 4 of a cleaning part 1 by a carrier system 8 so as to be immersed in liquid nitrogen gas. The pollutants such as metallic particles and grease, etc., stuck on the LSI substrates A are solidified by the low temperature liquid nitrogen gas and then immediately removed from the surface of the LSI substrates both by the bubbling action of the liquid nitrogen gas and the action of ultrasonic oscillation. Finally, the cleaned up LSI substrates A, while avoiding the raising dust, etc., by a dust hood 14, are carried to a heat-drier part 2 by the carrier system 8 to be heated from the low temperature to room temperature as well as to dry up the dew on the substrates after the cleaning up process.



## LEGAL STATUS

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